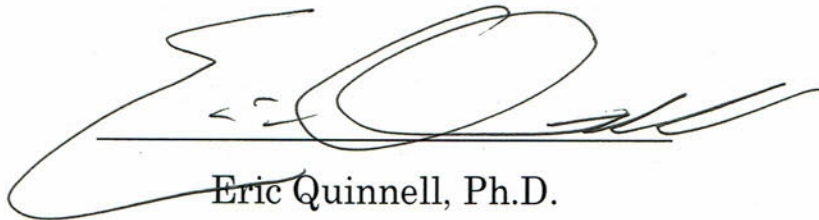


**December 3, 2020**

***King et al. v. Whitmer et al.*, Case No. 2:20-CV-13134**

**United States District Court for Eastern District of Michigan**

**Expert Response of Eric Quinnell, PhD**

A handwritten signature in black ink, appearing to read "Eric Quinnell", is written over a horizontal line. The signature is stylized with a large loop and a long horizontal stroke.

**Eric Quinnell, Ph.D.**

## **I. SUMMARY**

Today I reviewed a report from Jonathan Rodden, PhD, which makes arguments and responses to initial declarations from my affidavit which used publicly available data sourced from the actual vote counts in 2020 and 2016 General Election in Wayne and Oakland County.

My data analysis identifies statistical anomalies in a large selection of precincts outside Detroit in both Wayne and Oakland County. Dr. Rodden's responses mainly involve questioning why I do not cite "relevant literature" in attempted explanations of the data, as well as why I bother using the standard normal distribution in precinct level comparisons and vote differences as compared to their extremely-localized precinct histories. Rather than arguing line-by-line pedantic points, for which I am not compensated directly, the timeframe required of this response is prohibitive. Instead, allow me to instead focus on the larger method.

## **II. THE NULL HYPOTHESIS**

Mathematically, the "null hypothesis" is defined that there is no quantitative relationship between two sampled populations and is by definition the default conclusion until proven otherwise. In this case, the null hypothesis states the large movement from Republican or moderate counties in 2016 that then in 2020 voted excessively Democrat is explained by experimental error or mere chance until proven otherwise.

In efforts to explain that phenomena exist with some sort of meaning or relationship, it is a scientific and engineering "standard" to compare against a "standard normal distribution" and apply a testable hypothesis to attempt explanations to any anomalous deviations or new observations. This is why we call it the "standard" method and use the "standard" models for comparison. A hypothesis that



provides a both a prediction and a repeatable test that is successfully mathematically verified will un-seat the null hypothesis and become the new default explanation. Only then do we no longer need the standard normal.

Dr. Rodden offers many hypotheses against the null hypothesis that may explain such a distribution visualization for the voter pattern data, such as self-sourced GIS data analysis, geographical distribution, or demographic shifts mainly focused around his own research. For example, Dr. Rodden claims that the democratic share of votes in the suburbs is a “national trend” and therefore should be expected – this theory is testably true in some places, but fails in places like San Francisco, Chicago, Philadelphia, and other democratic strongholds not located in “swing states”. Claiming a “national trend” based on self-referenced data without a hard-quantitative proof that has extremely present and available counter-examples is invalid speculation. This theory already certainly seems to immediately fail the requirement to overthrow the null hypothesis at a 3-sigma level. For non-Dr. Rodden sources, one can easily find analysis to the counter.

While Dr. Rodden is a presumed expert in the particular field of producing theories to describe voter pattern behaviors – allow me to contrast that against my field of engineering, where the burden of proving a hypothesis is exceedingly higher than that required for mere publication. Machines and devices that hypothesize without full 3-sigma proofs are presumed to fail unless proven beyond a probabilistic academic inference, with such failure presuming significant possibilities of harm and economic damage.

These mathematical anomalous vote gains, until explained and/or investigated, are of a large enough quantitative magnitude and consequence that the barrier of speculation should be held to engineering and mathematical standards, not to those of political science and editorial publications.

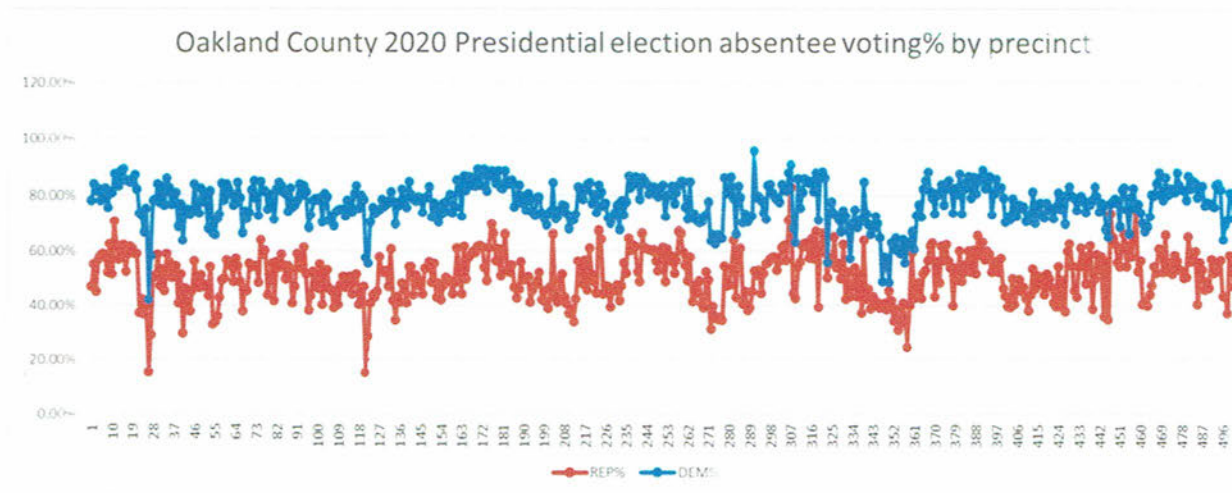
### III. TESTING THE HYPOTHESIS

Is Dr. Rodden able to test his hypothesis of Democratic suburban dominance with privileged access to ballots? Does he have population migration patterns in the Oakland County township of Troy, where not only did all voters that voted in 2016 again vote for their candidate, but both Trump and Biden benefitted from additional turnout? The additional turnout I cite as “new votes” are those above and beyond that from 2016. Here Trump gained 1,646 votes above 2016 (which 1<sup>st</sup> order seems like a shift directly from the losses in the Libertarian column), and Biden gained 6,677 votes above 2016. Note there were only 6,132 new registered voters above 2016.

In statistics, any “new population” may be added and absorbed to the whole – this population seems to have 8,000 voters who didn’t appear in 2016 that parachuted in and voted 80 Dem / 20 Rep – which is in complete opposition to Troy’s moderate voting history. In a technique called “resampling”, any new population that is added to an existing one is expected to behave and slightly change the behavior of the existing mass, testable by re-simulating the same dataset with the existing distribution mathematical qualities. Resampling in this case puts this new population deep into the tail of its own distribution, indicating again a completely new phenomena that needs explaining. Why would a populous increase its own turnout by 15% over 2016, and 98% of that turnout go to one candidate? Mathematically, this behavior is anomalous to its own dataset.

Furthermore, the null-hypothesis dataset in Oakland county currently sees the following to-the-precinct correlating behavior of each party’s participation in absentee ballot voting. An expert at such a rate should have no trouble generating (and likely already has) this graph with available data on absentee vote ratios of total:





What “literature” exists to explain that absentee ballot requests are a single variable – with a perfect scalar multiple of Democrats above Republicans – with a Pearson coefficient of 0.797? Every precinct where a Republican voted by absentee *guaranteed* roughly 1.7 Democrats to vote absentee, regardless of precinct. This “national phenomenon” of mathematically *non-independent variables* is not ubiquitous in all the Michigan counties nor in national data. Permit me to pile this onto the stack of “anomalies” we need to test for, as this sort of thing doesn’t happen in nature and certainly shows something non-normal (there’s that null hypothesis again).

#### IV. CONCLUSIONS

In other arguments, Dr. Rodden proceeds to cite a multitude of either unconnected or subjective historical data trends outside Michigan and mostly centered around his own research – including an overbearing litany of publications and curriculum vitae completely unrelated to the task at hand.

Finally, Dr. Rodden continues to say that my work alleged some sort of “fraud”. I allege no such thing in my affidavit – that would be the lawyer’s inference and theory in their brief, not my statement. I offer no hypothesis; I merely state the fact

that the null hypothesis currently shows abnormalities requiring an explanation to maintain faith in the fidelity of the vote.

Furthermore, my aim is that I may tell my descendants without doubt that not only does their vote actually matter, but that any behaviors that are statistically improbable are always properly investigated such that we may collectively always have faith in the fidelity of our vote.

## **V. QUALIFICATIONS**

I hold a PhD in Computer Arithmetic from The University of Texas at Austin. I am an electrical engineer that has built working silicon computation devices in the 100s of millions, perhaps billions, around the world. I hold a litany of patents and publications, which are likely irrelevant to this particular case, save for the declaration that my data is scrutinized to the highest level.

I welcome external cross-checking of my calculations which are, as aforementioned, applied to a publicly available data set. All my analysis is as a volunteer citizen wishing to apply my skills to help reconcile the voting situation at hand which, at least for myself, I identify as anomalies that need an attempted explanation.